



Indoor Air Quality Tools for Schools

Indoor Air Quality (IAQ)

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HEATING, VENTILATION AND AIR CONDITIONING (HVAC) TIPS FOR WINTER

Quality HVAC system design, operation and maintenance are critical for providing healthy IAQ in schools. Properly functioning HVAC systems provide adequate ventilation, control odors and reduce the pollutants that cause most IAQ problems inside school buildings. In addition to improving occupant health and performance, regular HVAC maintenance saves energy.

In anticipation of the colder months, schools should pay special attention to their HVAC units, including:

- Be aware of [indoor humidity levels](#) as the outside temperature drops. To protect health, comfort, the school building and its contents, it is important that indoor relative humidity be maintained below 60%, ideally between 30% and 50%.
- Ensure that facilities and maintenance staff change filters on a regular basis. [Air filters](#) should have a dust-spot rating between 35% and 80% or a Minimum Efficiency Rating Value (MERV) between 8 and 13 depending on the compatibility of your air handling unit. The higher the MERV rating, the more particulates will be filtered.

Did You Know?

In colder climates, there can be operating conditions which will cause freezing within the energy recovery heat exchanger and it is often necessary to equip ERV systems with a frost control option.

Test Your IAQ Management Knowledge...

1. True or False: Routing inspection of a school's HVAC system should be part of an IAQ management program?

A. True

B. False

Find out the answer to this question and learn more about IAQ management on the [IAQ Tools for Schools website](#).

Do you have other questions on IAQ management? Post them on the Schools IAQ Connector Email Discussion List.

Join today by sending a blank email message to schools_iaq_connector_subscribe@lists.epa.gov.

Do you have suggestions for future EPA webinar topics?

Send your ideas to IAQTfSConnector@cadmusgroup.com!

- Ensure proper ventilation as there are significant spatial and seasonal variations in the volume of air delivered by most HVAC systems. Learn more by checking out the [ASHRAE Standard 62-2013](#).
- Have a plan to ensure HVAC systems are functioning properly over winter and holiday breaks. With [intermittent building occupancy](#) over breaks, outdoor air ventilation rates may need to be adjusted. Check all air registers to ensure that they are not obstructed by furniture or large objects that may have been moved inadvertently.

Access Previous Connector E-Newsletters Online

Can't find a previous *IAQ Tools for Schools* Connector e-newsletter in your inbox? No problem! Visit the [e-newsletter archive](#) on the *IAQ Tools for Schools* website to access printable versions (PDFs) of all past editions.

HVAC RESOURCES

Checklist: Download and use the [ventilation checklist](#). Tailor it to fit the needs of our individual school or district.

Software: The [School Advanced Ventilation Engineering Software \(SAVES\) package](#) is a tool to help school designers assess the potential financial payback and indoor humidity control benefits of Energy Recovery Ventilation (ERV) systems for school applications. Both SAVES software tools (The Energy Recovery Ventilation Financial Assessment Software Tool (EFAST) and the Indoor Assessment Tool (IHAT)) can be [downloaded here](#).

Standards: School HVAC Systems should be designed and operated to provide a minimum outdoor air ventilation rate consistent with current [ASHRAE Standards 62.1](#). For classrooms, this standard is about 15 cubic feet per minute (cfm) of outdoor air per person.

Webinars: Poorly maintained HVAC units can lead to IAQ problems, such as mold issues. For additional information on how to create healthy learning environments in the winter, download the two webinars, [Mold and Moisture: Double Trouble for Schools](#) and [Integrated Pest Management \(IPM\) in Schools—Basics for Winter](#).

NEWS AND EVENTS

- **[Creating Healthy Indoor Environments in Tribal Communities: Best Practices from Tribal Programs](#)** webinar, December 9, 2013, 1-2p.m. ET. Attend this EPA webinar to learn best practices for working with tribal communities to establish and sustain healthy indoor environments in school facilities. This webinar will demonstrate how EPA's [IAQ Tools for Schools guidance](#) can play a pivotal role in helping schools establish IAQ programs, reduce asthma triggers and enhance energy audits. The webinar will also feature two tribal environmental health professionals who have worked with schools in their communities to proactively manage IAQ.
- **[American Association of School Administrators \(AASA\) National Conference on Education](#)**, February 13-14, 2014, in Nashville, TN. Attend this conference to network with thousands of school administrators and learn how to address the most critical topics facing public school educators.
- **[Green Schools National Conference](#)**, March 27-29, 2014, Sacramento, CA. Hosted by the Green Schools National Network, this conference will bring together people committed to the creation and support of healthy, green and sustainable schools. [Register soon](#) to take advantage for reduced registration costs.

GET ANSWERS TO YOUR QUESTIONS

Is there a topic you want to see covered in an *IAQ Tools for Schools* Connector e-newsletter? Do you have suggestions for a webinar or e-newsletter feature, or do you have questions about a specific IAQ topic? If so, send us an email at IAQTfSConnector@cadmusgroup.com.

Share YOUR news and events! Send us information to share with the school IAQ community. It could be featured in the next Connector e-newsletter. Email your news and events to IAQTfSConnector@cadmusgroup.com.

The *IAQ Tools for Schools* guidance is a comprehensive resource designed to help schools maintain a healthy environment in school buildings by identifying, correcting and preventing IAQ problems. Learn more about the *IAQ Tools for Schools* guidance at <http://www.epa.gov/iaq/schools>.